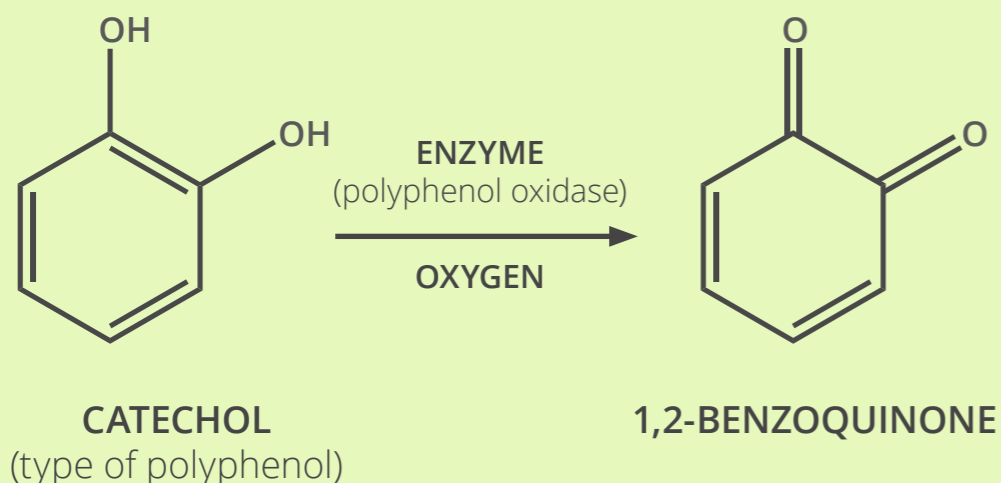


THE CHEMISTRY OF AN AVOCADO

WHAT MAKES AVOCADO GO BROWN?



Avocados contain a class of compounds called phenols. These compounds can be converted to compounds called quinones when exposed to oxygen in the air - this process is hastened by the enzyme polyphenol oxidase.

Some of these quinone compounds are toxic to bacteria, and so the process is beneficial for the fruit. However, the quinones can also react with themselves to form long polymer chains, causing the brown colouration. This also occurs in many other fruits. Avocados brown quickly as they have a large amount of polyphenol oxidase.

The polymeric compounds causing the brown colouration are melanin pigments. Melanin is also the primary pigment determining skin colour in humans.



PREVENTING THE BROWNING OF AVOCADOS



Contrary to popular belief, leaving the stone in the avocado or guacamole doesn't slow browning, as it doesn't block oxygen. Covering with clingfilm can block oxygen, and hence delay browning. Adding lemon or lime juice, or chilling the avocado, can also delay browning, as it inhibits the activity of the polyphenol oxidase enzyme.

